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1. Document ID: US 3657003 A Relevance Rank: 52

L13: Entry 6 of 6 File: USPT Apr 18, 1972

US-PAT-NO: 3657003

DOCUMENT-IDENTIFIER: US 3657003 A

TITLE: METHOD OF RENDERING A NON-WETTABLE SURFACE WETTABLE

DATE-ISSUED: April 18, 1972

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kenney; John Thomas	Trenton	NJ	N/A	N/A

US-CL-CURRENT: 427/430.1, 106/1.18, 106/1.21, 106/1.25,
106/286.1, 106/286.2, 106/286.3, 106/286.4, 106/286.5,
106/286.6 , 106/286.7, 106/286.8, 252/62.56, 264/DIG.19,
427/443.1, 516/82, 516/86, 516/88, 516/89, 516/90, 516/91 ,
516/92, 516/928, 516/93, 516/95

ABSTRACT:

Aqueous wetting solutions comprise stable colloids, the solid phase of which is a hydrous oxide of one or more selected elements. The solid, particulate phase of the colloid is produced by a controlled hydrolysis and nucleation reaction which continues until solid phase particles having appropriate size and surface chemistry result. Application of the wetting solutions to any known non-wettable surface renders such surface wettable, via deposition of the particles of the solid phase onto the surfaces by short order forces. The rendering of the surfaces wettable is accomplished without effecting a physical or chemical change of the surface.

21 Claims, 0 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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2. Document ID: US 3767590 A Relevance Rank: 52

L13: Entry 5 of 6

File: USPT

Oct 23, 1973

US-PAT-NO: 3767590

DOCUMENT-IDENTIFIER: US 3767590 A

TITLE: TEXT NOT AVAILABLE

DATE-ISSUED: October 23, 1973

US-CL-CURRENT: 516/92; 106/1.11, 106/286.1, 106/286.2,
106/286.3, 106/286.4, 106/286.5, 106/286.6, 106/286.7,
106/286.8 , 252/62.56, 252/634, 264/DIG.19, 516/88

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☒ 3. Document ID: US 3985066 A Relevance Rank: 52

L13: Entry 4 of 6

File: USPT

Oct 12, 1976

US-PAT-NO: 3985066

DOCUMENT-IDENTIFIER: US 3985066 A

TITLE: Single point means for slotter adjustment

DATE-ISSUED: October 12, 1976

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kern; William M.	New York	NY	N/A	N/A

US-CL-CURRENT: 493/60; 83/332, 83/665, 83/698.51

ABSTRACT:

A single point adjusting means for a rotary slotter used to transform sheets into box blanks is constructed so that each head is constructed of two sections normally locked together by a spring clutch. Each section carries a slotter blade and one section is keyed directly to the main drive shaft. The other section is selectively operable by a pneumatic power means between a cutting position wherein the spring clutch is engaged and an adjusting position wherein it is locked to the machine frame at an angular indexing position. At this time rotation of the main shaft will move the head section keyed thereto while the other section remains fixed thereby adjusting the relative angular positions of the slotter blades.

Blade changing is facilitated by providing spring clamp means and a pneumatic actuated means for releasing the blade clamp.

14 Claims, 6 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 4

☒ 4. Document ID: US 4435220 A Relevance Rank: 52

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. Desc	Image
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US-PAT-NO: 4515850

DOCUMENT-IDENTIFIER: US 4515850 A

TITLE: Composite ferrite textile

DATE-ISSUED: May 7, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ishino; Ken	Tokyo	N/A	N/A	JPX
Hashimoto; Yasuo	Tokyo	N/A	N/A	JPX
Ichihara; Kenichi	Tokyo	N/A	N/A	JPX
Narumiya; Yoshikazu	Tokyo	N/A	N/A	JPX

US-CL-CURRENT: 442/168; 264/112, 427/434.2, 442/164, 442/172,
442/186, 442/187

ABSTRACT:

A composite ferrite cloth having ferro-magnetic property weaved with composite ferrite textile has been found. The composite ferrite textile is the mixture of ferrite powder and the binder for coupling the same. The binder may be a high molecule compound like plastics, or glass with low melting point. The composite textile may be produced either by slicing a composite ferrite sheet attached on a plastics substrate, depositing composite ferrite paint around a core textile similar to the producing process of an electric wire, or just mixing ferrite powder with plastics or glass. The ferrite cloth which is weaved with composite ferrite textile is flexible and has many fields of application.

20 Claims, 9 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. Desc	Image
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☒ 6. Document ID: US 4911957 A Relevance Rank: 52

L13: Entry 1 of 6

File: USPT

Mar 27, 1990

US-PAT-NO: 4911957

DOCUMENT-IDENTIFIER: US 4911957 A

TITLE: Method of forming ferrite film on particles or fibers

DATE-ISSUED: March 27, 1990

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Oishi; Masao	Neyagawa	N/A	N/A	JPX
Saito; Takao	Toyonaka	N/A	N/A	JPX
Ishikawa; Katsukiyo	Kyoto	N/A	N/A	JPX

US-CL-CURRENT: 427/443.1; 427/126.6, 427/132, 427/217, 427/222,
427/304

ABSTRACT:

Disclosed is a method of forming a ferrite film on particulate and/or fibrous substrate by adding an oxidizer solution and a ferrous ion solution to a deoxidized solution containing particulate and/or fibrous substrates to form a thin ferrite film on the particulate and/or fibrous substrates, wherein an addition amount of the ferrous ion solution is controlled such that an oxidation-reduction potential of the deoxidized solution keeps approximately a center point between the oxidation side and the reduction side, when a pH value of the dioxidized solution is adjusted to a constant value between pH 6 and 10.

8 Claims, 11 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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- ☐ 1. Document ID: US 3958066 A Relevance Rank: 52

L14: Entry 1 of 1 File: USPT May 18, 1976

US-PAT-NO: 3958066

DOCUMENT-IDENTIFIER: US 3958066 A

TITLE: Conductive synthetic fibers

DATE-ISSUED: May 18, 1976

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Imamura; Kazuyoshi	Nobeoka	N/A	N/A	JA
Ishikawa; Tatsuo	Nobeoka	N/A	N/A	JA
Kusunose; Tetsuhiro	Nobeoka	N/A	N/A	JA

US-CL-CURRENT: 428/372; 252/512, 252/513, 252/519.33, 361/212,
427/180, 427/205, 427/316, 427/343, 428/373, 428/389, 428/394,
428/395

ABSTRACT:

Thermoplastic synthetic polymer fibers having powder of metal attached to the surface of the fibers are subjected to a treatment for increasing the oxidation number of said metal from zero to a plus value, that is, oxidation in a broad sense. The resulting conductive synthetic fibers support a layer of a compound of the metal, i.e. an oxidized product of the metal in a broad sense, firmly and undetachably thereon, and have as low an electric resistivity as 10×10^{-5} .OMEGA./cm or less. The conductive fibers can be blended to ordinary synthetic fibers to improve their antistatic property, or can be substituted for expensive metal fibers. The thermoplastic synthetic polymer fibers are sheath-core fibers wherein the sheath has a lower melting point than the core.

11 Claims, 3 Drawing figures Exemplary Claim Number: 1,6
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. Desc	Image
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USPT	textile	51592	<u>L8</u>
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1. Document ID: US 5928720 A Relevance Rank: 99

L7: Entry 1 of 1

File: DWPI

Jul 27, 1999

DERWENT-ACC-NO: 1999-477929

DERWENT-WEEK: 199940

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TITLE: Oxide coating method for textile used in water filtration

INVENTOR: KANG, P K; KUHN, H H

PRIORITY-DATA:

1998US-0007687

January 15, 1998

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 5928720 A	July 27, 1999	N/A	008	B05D003/02

INT-CL (IPC): B05D 3/02

ABSTRACTED-PUB-NO: US 5928720A

BASIC-ABSTRACT:

NOVELTY - The method involves contacting a textile with a specific aqueous solution of ferrous or ferric salt and an aluminum salt at 100-500 deg. C. Iron (III) oxide hydroxide and aluminum oxide hydroxide are formed on the textile surface and nucleate to form a coating. The rate of adsorption of the oxide hydroxides onto the textile surface is greater than their rate of formation.

DETAILED DESCRIPTION - The method involves contacting a textile with an aqueous solution comprising ferrous or ferric salt, an aluminum salt and optionally a compound which produces ammonia by hydrolysis, a buffering and pH control agent and dispersing agent. The solution is heated to 50-100 deg. C. The ferrous ion is hydrolyzed and oxidized or the ferric ion is hydrolyzed to form an iron(III) oxide hydroxide and the aluminum ion is hydrolyzed to form an aluminum oxide hydroxide. The oxide hydroxide compounds which are present as subcolloidal particles are nucleated in situ at the surface of the substrate to form a substantially amorphous coherent iron(III) oxide hydroxide/aluminum oxide hydroxide coating on the substrate surface. The resultant rates of adsorption of the oxide

hydroxides onto the substrate surface are greater than their rates of formation.

USE - For coloring textile substrates formed from natural, synthetic or inorganic fibers, especially polyester. The treated substrates have bacteriostatic and virus removal properties and can be used in water filtration. The textile substrates may also have magnetic properties.

ADVANTAGE - Smooth, durable, amorphous, coherent coatings are obtained from inexpensive, readily available iron and aluminum salts. The coatings have improved color fastness and improved bacteriostatic properties.

Full	Title	CIT.1	REV.1	CLS.1	REF.1	DRAW.1
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1. Document ID: US 5928720 A Relevance Rank: 99

L8: Entry 1 of 6

File: USPT

Jul 27, 1999

US-PAT-NO: 5928720

DOCUMENT-IDENTIFIER: US 5928720 A

TITLE: Textile surface coatings of iron oxide and aluminum oxide

DATE-ISSUED: July 27, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kuhn; Hans H.	Spartanburg	SC	N/A	N/A
Kang; Peter K.	Gainesville	FL	N/A	N/A

US-CL-CURRENT: 427/190; 427/201, 427/389.9

ABSTRACT:

A textile substrate is provided which is coated with a film comprising iron (III) oxide hydroxide and aluminum oxide hydroxide. This film or coating is formed by contacting the textile substrate with an aqueous solution comprising ferrous or ferric salts and aluminum salts. The iron (II), iron (III), and aluminum ions are hydrolyzed and the iron (II) ions are also oxidized under controlled conditions. These hydrolyzed species then, it is believed, coprecipitate or copolymerize to on the textile surface to form a smooth, coherent, substantially amorphous iron (III) oxide/aluminum oxide hydroxide film or coating on the surface of the substrate without forming an insoluble iron (III) or aluminum hydroxide precipitate in the solution. This is accomplished by controlling the reaction conditions such that the rates of adsorption onto the substrate surface of both iron (III) and aluminum oxide hydroxides are greater than the rates of formation of said same oxide hydroxide particles. The resultant coating is substantially amorphous with extremely limited crystalline formation. The obtained substrate has very good color fastness, bacteriostatic, and virus removing properties and can be utilized as an inexpensive and effective water filtration article.

13 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 2. Document ID: US 4677019 A Relevance Rank: 72

L8: Entry 2 of 6 File: USPT Jun 30, 1987

US-PAT-NO: 4677019

DOCUMENT-IDENTIFIER: US 4677019 A

TITLE: Carbon-containing protective fabrics

DATE-ISSUED: June 30, 1987

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
von Blucher; Hubert	D-4000 Dusseldorf	N/A	N/A	DEX

US-CL-CURRENT: 442/227; 428/323, 428/408, 442/123, 442/374

ABSTRACT:

A material for protection against chemical pollutants is produced by spraying onto a base fabric a mixture of activated carbon and a polymer binder to produce an open-pored foam structure which does not materially reduce the air permeability. The binder is permeable to the pollutant so the latter can reach the carbon, and the binder is less than 20% of the coating.

11 Claims, 5 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 3. Document ID: US 4510193 A Relevance Rank: 68

L8: Entry 4 of 6 File: USPT Apr 9, 1985

US-PAT-NO: 4510193

DOCUMENT-IDENTIFIER: US 4510193 A

TITLE: Filter sheet material

DATE-ISSUED: April 9, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Blucher; Hubert	D-4000 Dusseldorf	N/A	N/A		DEX
von Blucher; Hasso	D-4000 Dusseldorf	N/A	N/A		DEX
de Ruiter; Ernest	D-5090 Leverkusen 3	N/A	N/A		DEX

US-CL-CURRENT: 428/196; 428/198, 428/215, 428/341, 428/911,
435/197, 55/524, 96/154

ABSTRACT:

A filter sheet material consisting of an air-permeable, pliable, especially textile support which is covered only partially with a uniformly distributed adhesive on which adsorber particles, especially active carbon beads, are fixed and the use of such filter materials containing active carbon as adsorbent for protective suits.

16 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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☐ 4. Document ID: US 4210567 A Relevance Rank: 68

L8: Entry 6 of 6

File: USPT

Jul 1, 1980

US-PAT-NO: 4210567

DOCUMENT-IDENTIFIER: US 4210567 A

TITLE: Plastisol of an acrylate polymer and a plasticizer

DATE-ISSUED: July 1, 1980

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kosters; Bernhard	Heidelberg	N/A	N/A	DEX

US-CL-CURRENT: 524/290; 215/233, 428/344, 521/182, 521/73,
524/297, 524/548, 524/553, 524/555, 524/561

ABSTRACT:

Subject of this invention are plastisols based on selected plasticizers and on polymers of certain acrylic or methacrylic monomers, viz. mainly (i) t-butyl acrylate, a C.sub.1-4 alkyl, especially methyl, acrylate or cyclohexyl methacrylate, and optionally also (ii) one or more comonomers selected from methacrylates of aliphatic C.sub.2 to C.sub.10 alcohols, acrylates of aliphatic C.sub.1 to C.sub.10 alcohols, styrene and alpha-methyl styrene. The glass transition temperature of the polymer is above 35.degree. C., its average degree of polymerization more than 400 and its average particle size in the plastisol is 0.1 to 500 microns.

18 Claims, 1 Drawing figures Exemplary Claim Number: 1,2

Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 5. Document ID: US 4610905 A Relevance Rank: 44

L8: Entry 3 of 6

File: USPT

Sep 9, 1986

US-PAT-NO: 4610905

DOCUMENT-IDENTIFIER: US 4610905 A

TITLE: Yarn having specific properties

DATE-ISSUED: September 9, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
von Blucher; Hubert	D-4000 Dusseldorf	N/A	N/A		DEX
von Blucher; Hasso	D-4000 Dusseldorf	N/A	N/A		DEX
de Ruiter; Ernest	D-5090 Leverkusen 3	N/A	N/A		DEX

US-CL-CURRENT: 428/90; 210/505, 210/508, 210/688, 428/368,
428/372, 428/373, 428/400, 428/902, 428/921, 57/244, 57/251,
588/200, 588/900, 87/8

ABSTRACT:

Textile flat-shaped structures exhibiting specific properties, such as flame-resistance or adsorbing capacity, are required for technical purposes, said structures being at the same time characterized by a high flexibility and tensile strength, as well as good wearing characteristics when used for protective suits. This is achieved by the invention by yarns that are sheathed with active ingredients, such as adsorbents, fire-proofing agents, ion-exchangers, decontaminating agents for chemical combat agents, catalysts or fixed enzymes. The active ingredients are adhered to the surface of the yarn or embedded in a binding agent. The sheathing may be additionally braided or flocked.

20 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 6. Document ID: US 4455187 A Relevance Rank: 42

L8: Entry 5 of 6

File: USPT

Jun 19, 1984

US-PAT-NO: 4455187

DOCUMENT-IDENTIFIER: US 4455187 A

TITLE: Filter sheet material and method of making same

DATE-ISSUED: June 19, 1984

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
von Blucher; Hubert	D-4000 Dusseldorf	N/A	N/A		DEX
von Blucher; Hasso	D-4000 Dusseldorf	N/A	N/A		DEX
de Ruiter; Ernst	D-5090 Leverkusen 3	N/A	N/A		DEX

US-CL-CURRENT: 156/277; 156/320, 427/210, 427/211, 427/265,
427/286, 427/288, 428/196, 428/206, 442/121

ABSTRACT:

The invention relates to a filter sheet material composed of an air-permeable, flexible, especially textile supporting layer, on which there is imprinted in a certain pattern a mixture containing an adsorbent in powder form and a polymeric binding agent, the adsorbent covering up to 90% of the surface of the supporting layer. The invention furthermore relates to the use of such filter sheet materials with active carbon as adsorbent for protective clothing, and to the preparation of the material by rotary screen printing from a paste made of the powdered adsorbent and a dispersion of the polymeric binding agent.

13 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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- ☒ 1. Document ID: US 6022619 A Relevance Rank: 99

L1: Entry 1 of 1

File: USPT

Feb 8, 2000

US-PAT-NO: 6022619

DOCUMENT-IDENTIFIER: US 6022619 A

TITLE: Textile composite with iron oxide film

DATE-ISSUED: February 8, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kuhn; Hans H.	Spartanburg	SC	29306	N/A

US-CL-CURRENT: 428/373; 427/434.6, 428/372, 8/637.1, 8/645

ABSTRACT:

A colored textile composite is produced by forming an iron (III) oxide film on a textile surface. This is accomplished by contacting the textile with an aqueous solution having an iron (II) or iron (III) species present. The iron (II) ion resulting from the dissociated iron (II) salt, if an iron (II) salt is utilized, is first hydrolyzed within the aqueous solution and then oxidized under controlled conditions to form iron (III) oxide (hydroxide). The iron (III) ion resulting from the dissociated iron (III) salt, if an iron (III) salt is utilized, is only hydrolyzed under controlled condition to form iron (III) oxide (hydroxide). The iron (III) oxide is then nucleated and forms a smooth and coherent iron (III) oxide film or coating on the surface of the textile without forming an insoluble iron (III) hydroxide precipitate in the solution. This reaction occurs because the reaction conditions are controlled in such a manner as to form sub-colloidal sized iron oxide particles which, in turn, permits a faster rate of adsorption of the iron (III) oxides onto the substrate surface than the rate of formation of the same particles. The iron (III) oxide formed may be goethite, hematite, or magnetite or any mixture thereof. Varying the type of oxide formed allows control over the color shade and other properties of the treated textile composite.

15 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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